

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:


THE APPLICATION OF SOUTH 641 WATER	)	
DISTRICT FOR AN ADJUSTMENT OF WATER	)	
AND SEWER RATES PURSUANT TO THE	)	CASE NO. 93-108
ALTERNATIVE RATE FILING PROCEDURE FOR	)	
SMALL UTILITIES	)	

O R D E R

On April 15, 1993, South 641 Water District ("South 641") filed its application for Commission approval of a proposed increase in its rates for water and sewer service. Commission Staff, having performed a limited financial review of South 641's operations, has prepared the attached Staff Report containing Staff's findings and recommendations regarding South 641's proposed rates. All parties should review the report carefully and provide any written comments or requests for a hearing or informal conference no later than 15 days from the date of this Order.

IT IS THEREFORE ORDERED that all parties shall have 15 days from the date of this Order to provide written comments regarding the attached Staff Report or requests for a hearing or informal conference. If no request for a hearing or informal conference is received, then this case will be submitted to the Commission for a decision.

Done at Frankfort, Kentucky, this 7th day of May, 1993.  
PUBLIC SERVICE COMMISSION

  
\_\_\_\_\_  
For the Commission

ATTEST:

  
\_\_\_\_\_  
Executive Director

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STAFF REPORT

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STAFF REPORT  
ON  
SOUTH 641 WATER DISTRICT  
CASE NO. 93-108

Preface

On August 6, 1991, the Kentucky Public Service Commission ("Commission") received a request for assistance in the preparation of a rate application from South 641 Water District ("South 641") . To satisfy this request, Commission Staff ("Staff") chose to perform a limited financial review of South 641's operations for the test period ending December 31, 1991. This review was performed by Jack Scott Lawless and Brent Kirtley and was completed on January 7, 1993 upon delivery of South 641's rate application.

Mr. Kirtley was responsible for assistance on matters and for sections of this report related to operating revenues and rate design. The remaining sections of the alternative rate filing form and sections of this report were prepared by or under the direct supervision of Mr. Lawless.

On April 15, 1993, South 641 filed its alternative rate filing application requesting to increase its annual operating revenues for water and sewer operations by \$23,761 and \$2,343, respectively. Staff is in agreement with this request.

Scope

The scope of the review was limited to obtaining information to determine whether test period operating revenues and expenses were representative of normal operations. Insignificant or immaterial discrepancies were not pursued and are not addressed herein. During the

course of the review, Staff identified pro forma adjustments to test year operations that were known and measurable as well as fair, just and reasonable. Adjustments that met these parameters were included in the determination of revenue requirements.

The analysis of operating revenues and expenses and the determination of revenue requirements for the water and sewer divisions are discussed in separate sections of this report.

Allocation of Pro-Forma and Test-Year Expense

In its application South 641 indicated that the books and records of its water and sewer operations are kept jointly. For rate-making purposes, Staff has applied allocation factors to pro forma and test period expenses in order to more appropriately reflect water and sewer revenue requirements and to eliminate material subsidization between the affiliated divisions. The methodology employed by Staff to determine the appropriate allocation percentages was to allocate administrative expenses based on the total number of customers served by each division and to allocate maintenance-related expenses based on each division's gross utility plant in service ("UPIS"). These allocation factors were calculated as follows:

<u>Number of Customer Factor</u>	<u>Number</u>	<u>Percent</u>
Sewer Customers	256	44.99%
Water Customers	<u>313</u>	<u>55.01%</u>
Total	<u>569</u>	<u>100%</u>
<u>UPIS Factor</u>	<u>Amount</u>	<u>Percent</u>
Sewer UPIS	\$ 288,400	24.80%
Water UPIS	<u>874,500</u>	<u>75.20%</u>
Total	<u>\$1,162,900</u>	<u>100%</u>

SOUTH 641 - WATER DIVISION

A. Analysis of Operating Revenues and Expenses

Operating Revenues

The Water Division reported test-year total operating revenue of \$60,694. Per Staff analysis of the records, the following adjustments were made:

Water Division Reported Operating Revenue	\$60,694
One Time Irrigation Sales	(978)
Bad Debts	(320)
Purchased Water Adjustment	3,858
Billing Analysis Adjustment	<u>3,667</u>
Total normalized operating revenue	<u>\$66,921</u>

Reported operating revenue included a one-time sale for agricultural irrigation. The information gathered by the Commission also showed uncollected bad debts in the amount of \$320 that had not previously been accounted for. A Purchase Water Adjustment in Case No. 91-339 became effective September 10, 1991, and resulted in an adjustment adding \$3,858 to reported operating revenue. The final adjustment resulted from disparities uncovered during the billing analysis, and produced an addition of \$3,667 to reported operating revenue. For the purposes of

this report, normalized test-year revenue for the Water Division shall be considered to be \$66,921.

Operating Expenses

The Water Division reported operating expenses of \$63,721 in its 1991 annual report. By utilizing the aforementioned factors for the purpose of allocating pro forma and test period operating expenses, Staff has increased test year expenses by \$10,566 as indicated in Appendix C attached to this report.

Salaries and Wages

The Water Division reported test year administrative salaries and wages expense of \$5,896 and maintenance salaries and wages expense of \$8,579. Staff has allocated \$4,989<sup>1</sup> of the total test-year administrative salaries to the Water Division, thus requiring a decrease in test year administrative salaries expense of \$906<sup>2</sup>. Staff calculated total pro forma maintenance salaries expense to be \$13,308<sup>3</sup> of which

<sup>1</sup>	Total Expense	\$ 9,070
	Times: Allocation Factor	<u>55.01%</u>
	Pro forma Allocated Expense	<u>\$ 4,989</u>
<sup>2</sup>	Pro forma Allocated Expense	\$ 4,989
	Less: Test year	<u>(5,896)</u>
	Adjustment	<u>\$ (907)</u>
<sup>3</sup>	Pro forma weekly salary	\$ 255.92
	Annualize	<u>52</u>
	Pro forma	<u>\$ 13,308</u>

\$10,007<sup>4</sup> was allocated to the Water Division. Staff has included the appropriate increase of \$1,428<sup>5</sup> to salaries and wages expense in order to reflect this allocation.

Purchased Water for Resale

The Water Division reported test year purchased water for resale of \$12,766. Staff adjusted this amount so that 100% of the total pro forma purchased water for resale would be allocated to the Water Division. The pro forma expense of \$21,848 was calculated by applying the current rate charged by South 641's supplier of \$.125 per hundred gallons to the normalized gallons purchased of 17,478,000 gallons. Therefore, Staff has increased test year operating expenses by \$9,082<sup>6</sup>.

Purchased Power, Office Supplies and Contracted Services

During the course of its review, Staff examined the invoices included in these accounts and is of the opinion that the amounts included in the allocation table below are at a reasonable level for rate-making purposes. Staff and South 641 agreed to allocate these

<sup>4</sup>	Total Expense	\$ 13,308
	Times: Allocation Factor	<u>75.20%</u>
	Pro forma Allocated Expense	<u>\$ 10,007</u>
<sup>5</sup>	Pro forma Allocated Expense	\$ 10,007
	Less: Test year	<u>(8,579)</u>
	Adjustment	<u>\$ 1,428</u>
<sup>6</sup>	Pro forma Allocated Expense	\$ 21,848
	Less: Test year	<u>(12,766)</u>
	Adjustment	<u>\$ 9,082</u>

District operating expenses based on the "number of customers" factor for rate-making purposes. The necessary adjustments are summarized in the following table:

	<u>Purchased Power</u>	<u>Office Supplies</u>	<u>Contracted Services</u>
Total Expense	\$ 5,155	\$ 2,544	\$ 5,117
Times Allocation Factor	<u>55.01%</u>	<u>55.01%</u>	<u>55.01%</u>
Pro Forma Allocated Expense	2,836	1,400	2,815
Less Test Year	<u>(3,351)</u>	<u>(1,654)</u>	<u>(3,326)</u>
Decrease	<u>\$ (515)</u>	<u>\$ (254)</u>	<u>\$ (511)</u>

Operating Supplies, Maintenance, Insurance and Depreciation

During the course of its review, Staff examined the invoices included in these accounts and is of the opinion that the amounts included in the allocation table below are at a reasonable level for rate-making purposes. Staff and South 641 agreed that it was more appropriate to allocate these District operating expenses based on the UPIS factor for rate-making purposes. The necessary adjustments are summarized in the following table:

	<u>Operating Supplies</u>	<u>Maintenance</u>	<u>Insurance</u>	<u>Depreciation</u>
Total Expense	\$ 1,224	\$ 5,892	\$ 2,326	\$ 29,075
Times Allocation Factor	<u>75.20%</u>	<u>75.20%</u>	<u>75.20%</u>	<u>75.20%</u>
Pro Forma Allocated Expense	921	4,431	1,749	21,864
Less: Test Year	<u>(796)</u>	<u>(3,830)</u>	<u>(1,512)</u>	<u>(18,899)</u>
Adjustment	<u>\$ 125</u>	<u>\$ 601</u>	<u>\$ 237</u>	<u>\$ 2,965</u>



Taxes Other Than Income Taxes

The Water Division reported test year taxes other than income taxes expense of \$2,905. Staff has made a net reduction to this amount of \$1,686<sup>7</sup> to reflect the pro forma payroll taxes of \$1,147, the allocation of the PSC fee of \$72<sup>8</sup> based on the number of customers and the elimination of school tax that was erroneously booked as an expense.

B. Revenue Requirements Determination

The approach most frequently used by this Commission to determine revenue requirements for a water district with outstanding bond issuances such as South 641, is a 120 percent debt service coverage on the average annual debt service requirement. Staff recommends the use of this approach in determining the Water Division's revenue requirements. Staff has calculated an increase in normalized operating revenues of \$23,761, as follows:

Salaries - Administrative	\$ 4,989
Salaries - Maintenance	<u>10,007</u>
Total Taxable Salaries	14,996
Times: FICA Rate	<u>7.65%</u>
Pro forma FICA	1,147
PSC fee	<u>72</u>
Total Pro forma	1,219
Less: Test year	<u>(2,905)</u>
Adjustment	<u>\$ (1,686)</u>
Total Expense	\$ 130
Times: Allocation Factor	<u>55.01%</u>
Pro forma Allocated Expense	<u>\$ 72</u>

Adjusted Operating Expenses	\$ 74,287 <sup>9</sup>
Average Annual Debt Service	17,891 <sup>10</sup>
20 Percent DSC	<u>3,578<sup>11</sup></u>
Total Revenue Requirement	95,756
Less: Normalized Operating Revenue	(66,921)
Pro forma Interest Income	<u>(5,074)</u>
Required Increase	<u>\$ 23,761</u>

### C. Rate Design

In its application, the Water Division filed a schedule of present and proposed rates that did not include any changes to its rate design. Staff is in agreement that the present rate structure should not be altered. The recommended rates will generate the operating revenue of \$90,681. Therefore, Staff recommends that the rates in Appendix A be approved for water service.

<sup>9</sup> See Appendix C

<sup>10</sup> <u>Year of Payment</u>	<u>Amount</u>
1993	\$ 18,116
1994	17,891
1995	<u>17,666</u>
Total	53,673
Divide by: 3 years	<u>3</u>
Three year average	<u>\$ 17,891</u>
<sup>11</sup> Average Annual Debt Service	\$ 17,892
Times: Debt Service Coverage Rate	<u>20%</u>
Debt Service Coverage (DSC)	<u>\$ 3,578</u>

SOUTH 641 - SEWER DIVISION

A. Analysis of Operating Revenues and Expenses

Operating Revenue

In its application, the Sewer Division reported test-year total operating revenue of \$32,498. However, the Commission authorized a purchased water adjustment in Case No. 91-339 effective September 10, 1991, and an adjustment of \$1,826 has been added to reported operating revenue. The results of the billing analysis performed by Staff indicate that \$2,810 should be deducted from reported operating revenue. Therefore, for the purposes of this report, normalized test-year revenue for the Sewer Division shall be considered to be \$31,514.

Operating Expenses

The Sewer Division reported operating expenses of \$33,457 in its 1991 annual report. By utilizing the aforementioned factors for the purpose of allocating proforma and test period operating expenses, Staff has decreased test year expenses by \$9,969 as indicated in Appendix D attached to this report.

Salaries and Wages

The Sewer Division reported test year administrative salaries and wages expense of \$3,175 and maintenance salaries and wages expense of \$4,620. Staff has allocated \$4,081<sup>12</sup> of the total test year administrative salaries to the Sewer Division, thus requiring an

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<sup>12</sup>	Total Expense	\$	9,070
	Times: Allocation Factor		<u>44.99%</u>
	Pro forma Allocated Expense	\$	<u>4,081</u>

increase to test year administrative salaries of \$906<sup>13</sup>. Staff calculated total pro forma maintenance salaries expense to be \$13,308<sup>14</sup> of which \$3,300<sup>15</sup> was allocated to the Sewer Division. Staff has included the appropriate decrease of \$1,320<sup>16</sup> to salaries and wages expense in order to reflect this allocation.

Purchased Water for Resale

The Sewer Division reported test year purchased water for resale of \$6,874. Staff allocated 100% of the pro forma purchased water expense to the Water Division which purchases the water for resale purposes. The purchase of this water provides no benefit to the customers of the Sewer Division and therefore, those customers should not be burdened with the associated expense. Accordingly, Staff has reduced test year operations by \$6,874 to eliminate this expense for rate-making purposes.

<sup>13</sup>	Pro forma Allocated Expense	\$ 4,081
	Less: Test year	<u>(3,175)</u>
	Adjustment	<u>\$ 906</u>
<sup>14</sup>	Pro forma weekly salary	\$ 255.92
	Annualize	<u>52</u>
	Pro forma	<u>\$ 13,308</u>
<sup>15</sup>	Total Expense	\$ 13,308
	Times: Allocation Factor	<u>24.80%</u>
	Pro forma Allocated Expense	<u>\$ 3,300</u>
<sup>16</sup>	Pro forma Allocated Expense	\$ 3,300
	Less: Test year	<u>(4,620)</u>
	Adjustment	<u>\$ (1,320)</u>

Purchased Power, Office Supplies and Contracted Services

During the course of its review, Staff examined the invoices included in these accounts and is of the opinion that the amounts included in the allocation table below are at a reasonable level for rate-making purposes. Staff and South 641 agreed to allocate these District operating expenses based on the "number of customers" factor for rate-making purposes. The necessary adjustments are summarized in the following table:

	<u>Purchased Power</u>	<u>Office Supplies</u>	<u>Contracted Services</u>
Total Expense	\$ 5,155	\$ 2,544	\$ 5,117
Times Allocation Factor	<u>44.99%</u>	<u>44.99%</u>	<u>44.99%</u>
Pro Forma Allocated Expense	2,319	1,145	2,302
Less Test Year	<u>(1,804)</u>	<u>(891)</u>	<u>(1,791)</u>
Increase	<u>\$ 515</u>	<u>\$ 254</u>	<u>\$ 511</u>

Operating Supplies, Maintenance, Insurance and Depreciation

During the course of its review, Staff examined the invoices included in these accounts and is of the opinion that the amounts included in the allocation table below are at a reasonable level for rate-making purposes. Staff and South 641 agreed that it was more appropriate to allocate these District operating expenses based on the "UPIS" factor for rate-making purposes. The necessary adjustments are summarized in the following table:

	<u>Operating Supplies</u>	<u>Maintenance</u>	<u>Insurance</u>	<u>Depreciation</u>
Total Expense	\$ 1,224	\$ 5,892	\$ 2,326	\$ 29,075
Times: Allocation Factor	<u>24.80%</u>	<u>24.80%</u>	<u>24.80%</u>	<u>24.80%</u>
Pro Forma Allocated Expense	304	1,461	577	7,211
Less: Test Year	<u>(428)</u>	<u>(2,062)</u>	<u>(814)</u>	<u>(10,176)</u>
Decrease	<u>\$ (124)</u>	<u>\$ (601)</u>	<u>\$ (237)</u>	<u>\$ (2,965)</u>

Taxes Other Than Income Taxes

The Sewer Division reported test year taxes other than income taxes expense of \$658. Staff has made a net reduction to this amount of \$35<sup>17</sup> to reflect the pro forma payroll taxes of \$565, the allocation of the PSC fee of \$58<sup>18</sup> based on the number of customers and the elimination of school tax that was erroneously booked as an expense.

<sup>17</sup>	Salaries - Administrative	\$ 4,081
	Salaries - Maintenance	<u>3,300</u>
	Total Taxable Salaries	7,381
	Times: FICA Rate	<u>7.65%</u>
	Pro forma FICA	565
	PSC fee	<u>58</u>
	Total Pro forma	623
	Less: Test year	<u>(658)</u>
	Adjustment	<u>\$ (35)</u>
<sup>18</sup>	Total Expense	\$ 130
	Times: Allocation Factor	<u>44.99%</u>
	Pro forma Allocated Expense	<u>\$ 58</u>

B. Revenue Requirements Determination

The approach most frequently used by this Commission to determine revenue requirements for a sewer district with outstanding bond issuances such as South 641, is a 120 percent debt service coverage on the average annual debt service requirement. Staff recommends the use of this approach in determining the Sewer Division's revenue requirements. Staff has calculated an increase in normalized operating revenues of \$2,343, as follows:

Adjusted Operating Expenses	\$ 23,488 <sup>19</sup>
Average Annual Debt Service	9,959 <sup>20</sup>
20 Percent DSC	<u>1,992<sup>21</sup></u>
Total Revenue Requirement	35,439
Less: Normalized Operating Revenue	(31,514)
Pro forma Interest Income	<u>(1,582)</u>
Required Increase	<u>\$ 2,343</u>

C. Rate Design

The Sewer Division filed a notice in its application that proposed to alter its rate design. Currently, monthly sewer rates are based on

<sup>19</sup> See Appendix D

<sup>20</sup> Year of Payment

1993	\$ 10,084
1994	9,959
1995	<u>9,834</u>
Total	29,877
Divide by: 3 years	<u>3</u>
Three year average	<u>\$ 9,959</u>

<sup>21</sup> Average Annual Debt Service \$ 9,959  
Times: Debt Service Coverage Rate 20%  
Debt Service Coverage (DSC) \$ 1,992

70 percent of monthly water bills. The proposal seeks to alter sewer charges to a flat rate of \$10.95 per month. Staff is in agreement that the proposal should be adopted. This new rate design will generate the operating revenue of \$33,512. Therefore, Staff recommends the rates in Appendix B be approved for sewer service.

E. Signatures

Jack Scott Lawless, CPA  
Prepared By: Jack Scott Lawless, CPA  
Public Utility Financial  
Analyst  
Water and Sewer Revenue  
Requirements Branch  
Division of Financial Analysis

Dennis Brent Kirtley  
Prepared By: Brent Kirtley  
Public Utility Rate  
Analyst  
Communications, Water  
and Sewer Rate Design Branch  
Division of Rates and Research



## APPENDIX A

### TO STAFF REPORT CASE NO. 93-108

The Staff recommends the following rate be prescribed for customers of South 641 Water District (Division of Water).

#### Schedule of Rates

First 2,000 gallons	\$12.30 Minimum Bill
Next 3,000 gallons	5.30 per 1,000 gallons
Next 5,000 gallons	4.60 per 1,000 gallons
Over 10,000 gallons	4.00 per 1,000 gallons

APPENDIX B  
TO STAFF REPORT CASE NO. 93-108

The Staff recommends the following rate be prescribed for customers of South 641 Water District (Division of Sewer).

Schedule of Rates

Monthly Rate	\$10.95
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APPENDIX C  
TO STAFF REPORT CASE 93-108

South 641 Water Division  
Statement of Adjusted Operations

	Test Year	Adjustments	Present Rates
<b>Operating Revenue</b>			
Sales of Water			
Residential	\$59,716	\$3,858	
		3,667	
		(320)	466,921
Irrigation Customers	978	(978)	0
Total Sales of Water	60,694	6,227	66,921
Total Operating Revenue	60,694	6,227	66,921
<b>Operating Expenses</b>			
Operation and Maintenance			
Salaries and Wages-Employees	14,475	(906)	
		1,428	14,997
Purchased Water	12,766	9,082	21,848
Purchased Power	3,351	(515)	2,836
Materials and Supplies	6,279	125	
		601	
		(254)	6,751
Contractual Services	3,326	(511)	2,815
Transportation	119		119
Insurance	1,512	237	1,749
Miscellaneous	89		89
Total Operation and Maintenance	41,917	7,287	51,204
Depreciation	18,899	2,965	21,864
Taxes Other Than Income Taxes	2,905	(1,686)	1,219
Total Operating Expenses	63,721	10,566	74,287
Net Operating Income/(Loss)	(3,027)	(4,339)	(7,366)
Interest Income	5,074		5,074
Income Available for Debt Service	2,047	(4,339)	(2,292)
	=====	=====	=====

APPENDIX D  
TO STAFF REPORT CASE 93-108

South 641 Sewer Division  
Statement of Adjusted Operations

	Test Year	Adjustments	Pro forma Present Rates
Operating Revenue			
Measured Revenues			
Residential	\$32,155	(\$2,810)	
		1,826	\$31,171
	-----	-----	-----
Total Measured Revenues	32,155	(984)	31,171
	-----	-----	-----
Other Operating Revenue			
Miscellaneous Operating Revenue	343		343
	-----	-----	-----
Total Other Operating Revenue	343	0	343
	-----	-----	-----
Total Operating Revenue	32,498	(984)	31,514
	-----	-----	-----
Operating Expenses			
Operation and Maintenance			
Fuel and Power	8,678	(6,874)	
		515	2,319
Miscellaneous Supplies - Pumping	428	(124)	304
Maintenance - Pumping	2,062	(601)	1,461
Motor reading	64		64
Salaries and Wages	7,794	906	
		(1,319)	7,381
Office Supplies	891	254	1,145
Outside Services	1,791	511	2,302
Insurance	814	(237)	577
Miscellaneous	101		101
	-----	-----	-----
Total Operation and Maintenance	22,623	(6,969)	15,654
Depreciation	10,176	(2,965)	7,211
Taxes Other Than Income Taxes	658	(35)	623
	-----	-----	-----
Total Operating Expenses	33,457	(9,969)	23,488
	-----	-----	-----
Net Operating Income/(Loss)	(959)	8,985	8,026
Interest Income	1,582		1,582
	-----	-----	-----
Income Available for Debt Service	623	8,985	9,608
	=====	=====	=====